

PSYCHO-PHYSICAL DIMENSIONS OF COACHING FEMALE ATHLETES IN
TEACHER TRAINING COLLEGES IN CENTRAL REGION OF KENYA

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DECLARATION

This thesis is my original work and has not been presented for a degree in this university or any other institution of higher learning.

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DEDICATION

To my dear wife Leah, my children Brian, Sam and Lydia

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LIST OF ABBREVIATIONS AND ACRONYMS

MoE	: Ministry of Education
NSCT	: National Council for Science and Technology
OP	: Office of the President
PDE	: Provincial Director of Education
SPSS	: Statistical Package for Social Sciences
WHO	: World Health Organization

ABSTRACT

Female athletes have a unique way of responding to coaching behaviour. In addition, there are physical and psychological factors that influence the coaching of female athletes. The purpose of this study was, therefore, to assess the psycho-physical dimensions of coaching female athletes in teacher training colleges in central region of Kenya. The study assessed the extent to which the concern for body shape, the coach athlete relationship and coach leadership behaviour influences coaching of female athletes in teacher training colleges in central region of Kenya. The study further assessed other psycho-physical factors that influence female athletes' participation in training activities in teacher training colleges in central region of Kenya with variables being, fear of strenuous exercises, fear of injuries resulting from training, academic demands, motivation using verbal reinforcement and freedom to choose the mode of training. The target population for the study comprised female athletes in certificate and diploma teacher training colleges in central region of Kenya. The sample size was obtained using stratified random sampling procedure. The teacher training colleges were stratified into two strata; certificate teacher training colleges and diploma teacher training college. Simple random sampling technique was used to select 50% certificate teacher training colleges. Since there was only one diploma teacher training college, it was purposively selected. A proportion of 50% of female athletes from each of the colleges was then selected using simple random sampling technique. The study selected 444 (21.6%) respondents from the two randomly selected certificate teacher colleges and the one diploma training college. The study used the questionnaire as the main instrument for data collection. The Statistical Package for Social Sciences (SPSS) was used to code and organize the data. The data were summarized into descriptive statistics of frequencies and percentages. The results were presented in tables. The hypotheses were tested using chi-square (χ^2) and Wilcoxon signed ranks test at significance level of 0.05. The study results showed that the female athletes involvement in training activities is influenced by the concern for body shape, coach leadership behaviour and coach athlete relationship. The study results also revealed that female athletes differ in their preference for male or female coaches and youthful or elderly coaches. The fear of strenuous exercises prescribed by the coach, fear of injuries, academic demands, freedom to choose the mode of training and motivation using verbal reinforcement were all found to influence female athletes' participation in training activities. It is therefore recommended that there should be expansion of awareness and education on benefits of physical activities to female athletes, training of female athletes by coaches who understand female athletes' physical and psychological needs, having an assistant female coach when a male coach is coaching female athletes as well as addressing the psycho-physical factors influencing coaching of female athletes. The study recommends further research in order to gain a deeper insight on factors influencing coaching of female athletes.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Research generally indicates that females participate in sports for different reasons as compared to males and may respond to coaching techniques differently as well (Stewart & Taylor, 2000; Sherman & Hume, 2002). Coaching behaviour that has been traditionally acceptable, permissible or seen as possible with all athletes in the past may seem rude, unfair, or not encouraging enough by female athletes (Sherman & Hume, 2002). As observed by Stewart and Taylor (2000), Pendleton (2001) and Bristow (2009), there are some physical and psychological characteristics that are crucial for coaches to understand if they ever want to get the best out of the female athletes.

Female athletes have special concern about their bodies when engaging in sports (Weinberg & Gould, 1995; Otis, 2000). The body image influences their choice and participation in sports (Collins & Kay, 2003; Hoffmann, 2007). Research generally indicates that female athletes feel conflict about how participation in competitive sport and exercise affects their femininity (Weinberg & Gould, 1995; Hargreaves, 2001; Coakley, 2009). Female athletes report across sports a preoccupation with their appearance and a concern with avoiding masculinization of the body that some believe inevitably follows sports participation (Pendleton, 2001; Hargreaves, 2001). Lavallee, Kremer, Moran and Williams (2004) argue that a female's lack of muscular development are features of attractiveness. Girls and women are hesitant about participating in sport for fear of becoming too muscular (Pendleton, 2001).

Another key feature to coaching of female athletes is the coach-athlete relationship. Female athletes' preferences for same-sex or opposite-sex coaches have been examined and factors taken into consideration include the level of athlete's comfort in disclosure (Weinberg & Gould, 1995; Frey, Czech, Kent & Johnson, 2006), capability of being a role model (Laker, 2002; Lyle, 2007; Coakley, 2009) and the level of knowledge and ability to motivate (Frey *et al.*, 2006). Weinberg and Gould (1995) argue that female athletes need to establish personal relationships with coaches. Indeed, female athletes need to nurture a family-like camaraderie with teammates, coaches and prefer a friendly and more respectful atmosphere in which to train (Pendleton, 2001). According to Lavellee *et al.*, (2004), a coach's influence will vary by such variables as age, gender, physical maturity and sporting experience.

The type of leadership behaviour displayed by the coach can have a significant effect on the performance and psychological wellbeing of female athlete (Woods, 2001; Wooldridge, 2001). As observed by Woods (2001), female athletes prefer a democratic coaching style which includes participation in decision-making. Female athletes are unwilling to follow a directive without knowing the reasons behind the directive (Selders, 2010). According to Stewart and Taylor (2000), other factors affecting female athlete's performances in sports are the athlete's perception of coaching competence and coaching behaviours. Female athletes who are not provided with clear positive feedback regarding their performance lack self-confidence (Cox, 1990; Wooldridge, 2001). Research generally indicates that over-bearing displays of emotions turn off majority of female athletes (Woodridge, 2001; Frey *et al.*, 2006). Pendleton (2001) argues that coaches who

believe in yelling should do it sparingly and should direct it at the group rather than the individual.

Indeed, female athletes tend to avoid competition in daily life and physical activity settings feeling most comfortable in relationships where power is shared equally by all (Weinberg & Gould, 1995). Female athletes may not be as focused on the final winning outcome as their male counterparts and instead prefer to concentrate on becoming more physically fit and having fun, but that does not translate into lack of commitment or dedication to their sport (Diamant, 1991; Stewart & Taylor, 2000). Stewart (2011) argues that while being as competitive and skilled as their male equivalent, female athletes may be participating in sports for reasons other than those of their male counterparts.

Another factor that relates to coaching of female athletes is fear of injuries. Female athletes experience more fear of physical injury than male athletes (Cartoni, Minganti, & Zelli, 2005; Kontos, 2004). As observed by Kontos (2004), girls typically perceive more injury risk than boys in childhood play activities and adolescent sport participation.

In Kenya, female athletes in teacher training colleges compete both in zonal and national sport competitions. Female athletes in teacher training colleges in central region of Kenya participate under the central zone where the best team then proceeds as individual college to national competitions (Provincial Director of Education Central, personal interview, February 17, 2011). Currently, the teacher training colleges do not compete at international level. The female athletes in teacher training colleges are coached by teachers drawn from Physical Education Departments in their respective colleges and also talented teachers in sports from other departments. In addition, some

teacher training colleges hire external coaches (Provincial Director of Education Central, personal interview, February 17, 2011). Hence, the current study was designed to assess the psycho-physical dimensions that surround the coaching of the female athletes in the teachers training colleges in the central region of Kenya.

1.2 Statement of the Problem

Female athletes have a unique way of responding to coaching behaviours (Jones, Armour & Portrac, 2004). In addition, female athletes also have specific needs that should be understood by coaches. Without an understanding of these specific needs, various problems may arise including hostility and resentment between the coach and the athlete (Weinberg & Gould, 1995), frustration of coaches, (Jones *et al.*, 2004), burnout (Hargreaves, 2001) and quitting from sports participation (Stewart & Taylor, 2000). Hence, without a proper understanding of these needs, coaches and allied personnel might fail to provide effective professional services and interventions that sustain sport participation, improve performance and enhance training and coping skills in a timely and equitable manner. Therefore, an understanding of psychological and physical needs of college female athletes is of policy and practical importance. Improving Knowledge about these psycho-physical needs can inform the development of strategies to reform collegiate sporting situations in ways that assure appropriate support services for female athletes. Thus, in order for female athletes to benefit completely from participating in collegiate sports, coaching that is specific to their unique needs is a necessity.

The female athletes in teacher training colleges also double as students. Therefore, they are likely to face challenges of individual nature including their personal involvement in

academic-oriented activities, time constraints, class attendance, physical and emotional fatigue, coaching demands and institutional policies. These college environmental factors may influence the way the female athletes respond to their coaches and the way they would want to be coached.

In Kenya, female athletes upon graduation must be pivotal in influencing future participants in schools. It is, therefore, necessary to assess the psycho- physical factors that influence their participation in training activities prescribed by coaches so that in future they will also cater for these factors while training female students in schools.

Scholars and researchers have highlighted some factors that influence female athletes participation and performance in sports such as academic demands, fear of injuries resulting from training, fear of strenuous exercises prescribed by coaches, fear of developing muscular body features, the coach-athlete relationship, coach leadership behaviour, freedom to choose what to play, academic demands and motivation using verbal reinforcement (Wuest & Butcher, 1995; Stewart & Taylor, 2000; Lavellee *et al.*, 2004). It is in the light of this situation that this study was designed to assess the extent to which these psycho-physical factors influence the coaching of female athletes in teacher training colleges in central region of Kenya.

1.3 Purpose of the Study

The purpose of the study was to assess the psycho-physical dimensions of coaching female athletes in teacher training colleges in central region of Kenya. The specific psycho-physical factors that were assessed included fear of injuries resulting from training, fear of strenuous exercises prescribed by coaches, concern for body shape,

coach-athlete relationship, coach leadership behaviour, academic demands, motivation using verbal reinforcement and freedom to choose the mode of training.

1.4 Objectives of the Study

The objectives of the study were:

- i. To examine if the extent to which the concern for body shape affects female athletes involvement in training activities prescribed by coaches is the same between diploma and certificate teacher training colleges.
- ii. To determine the female athletes' extent of preference for;
 - (a) Male or female coaches
 - (b) Youthful or elderly coaches
- iii. To determine the extent to which the coach- athlete relationship of female athletes influences their participation in sports in teacher training colleges in central region of Kenya.
- iv. To determine the female athletes' most preferred coach-leadership behaviour.
- v. To find out the extent to which the following factors influence female athletes' participation in sports in teacher training colleges in central region of Kenya.
 - Fear of strenuous exercises prescribed by coaches
 - Fear of injuries resulting from training
 - Academic demands

- Motivation using verbal reinforcement
- Freedom to choose the mode of training (exercises)

1.5 Research Questions

- i. Is the extent to which the concern for body shape affects female athletes involvement in training activities prescribed by coaches the same between diploma and certificate teacher training colleges?
- ii. To what extent do female athletes prefer male or female coaches and youthful or elderly coaches?
- iii. To what extent do the female athletes' coach-athlete relationships influence their participation in sports in teacher training colleges in central region of Kenya?
- iv. What is the female athletes' most preferred coach-leadership behaviour?
- v. To what extent does fear of strenuous exercises prescribed by coaches, fear of injuries resulting from training, academic demands, motivation using verbal reinforcement and freedom to choose the mode of training influence participation of female athletes in physical training activities prescribed by their coaches?

1.6 Hypotheses

The following null hypotheses guided the study:

Ho₁ – The extent to which concern for body shape influences female athletes' participation in sports training activities will not differ significantly between athletes in certificate and diploma colleges.

Ho₂ – There would be no significant difference in female athletes' preference for female or male sports coaches.

Ho₃ – There would be no significant difference in female athletes' preference for youthful or elderly sports coaches in teacher training colleges in central region of Kenya.

1.7 Significance of the Study

The findings of the study may help female athletes understand what affects their coaching and the areas of concern they need to address. It may also help the coaches to understand their female clients and hence be better equipped to provide them with a satisfying experience that will ensure their long-term participation in the sports classes, sessions or programmes. The research is expected to contribute to the existing body of knowledge on physical and psychological factors that influence coaching of female athletes. The findings of the study could also be used as a point of reference for future researchers on female participants in sports at other levels of education. The findings may be used to upgrade the training programmes for coaches so that they are able to effectively handle female athletes.

1.8 Delimitations of the Study

The study was delimited to the following:

- i. Female athletes in teacher training colleges (certificate and Diploma) in central region of Kenya.

- ii. Use of the questionnaire as the main instrument for data collection.
- iii. The study was confined to the assessment of the psycho- physical factors that influence female athletes' participation and performance in sports.

1.9 Limitations of the Study

- i. The study was conducted bearing in mind that there were other factors which may influence the outcome of the study and were not investigated such as varied emphasis on sport in different colleges.
- ii. The study was conducted bearing in mind that sports infrastructure available in colleges could not be the same in terms of development and accessibility.
- iii. The study was conducted bearing in mind that the level of training of the coaches could be different in colleges.

1.10 Assumptions of the Study

The following assumptions were made for the study:

- i. Psycho- physical factors assessed are measurable through the study instrument.
- ii. Female participation in sport is influenced by the selected coach attributes such as coach leadership behaviour, gender, age among others.

1.11 Conceptual Framework

The study is based on the concept that coaching is affected by three demanding forces, namely; the coach, athlete and the situation, all of which have their own unique, independent and often conflicting needs (Bull, 1991; Woods, 1998). Bull (1991) postulates that none can be ignored, and it is only the smooth interaction of all three which bridges the gap between potential and performance. Bull (1991) further argues that athletic performance and satisfaction are two main consequences of interaction between three types of coaching behaviour, where a high quality performance occurs when the coach's behaviour style (actual behaviour) matches that required for the particular sporting task (prescribed behaviour). The satisfaction of the athlete, on the other hand, is dependent upon whether actual behaviour coincides with that which the athlete being coached would prefer (preferred behaviour). According to Bull (1991), the greater the degree of congruence between these three states of coaching behaviour, the greater the athlete's performance and satisfaction. Bull (1991) further argues that these three categories of behaviour in turn depend upon the specific characteristics of the coach, athlete and the situation.

Additionally, a coach has to constantly decide what is best for the athletes, and to balance this with their own preference and the demand of the situation by ensuring that the action coincides where possible with that prescribed by a task and that preferred by athletes (Bull, 1991; Woods, 1998). From the athlete's viewpoint, the ideal coaching environment emphasizes skill development, positive feedback, and concern for self-esteem and personal development (Bull, 1991). The outcome will have an influence upon a

coach's subsequent behaviour. These factors that influence coaching are shown in Figure1.

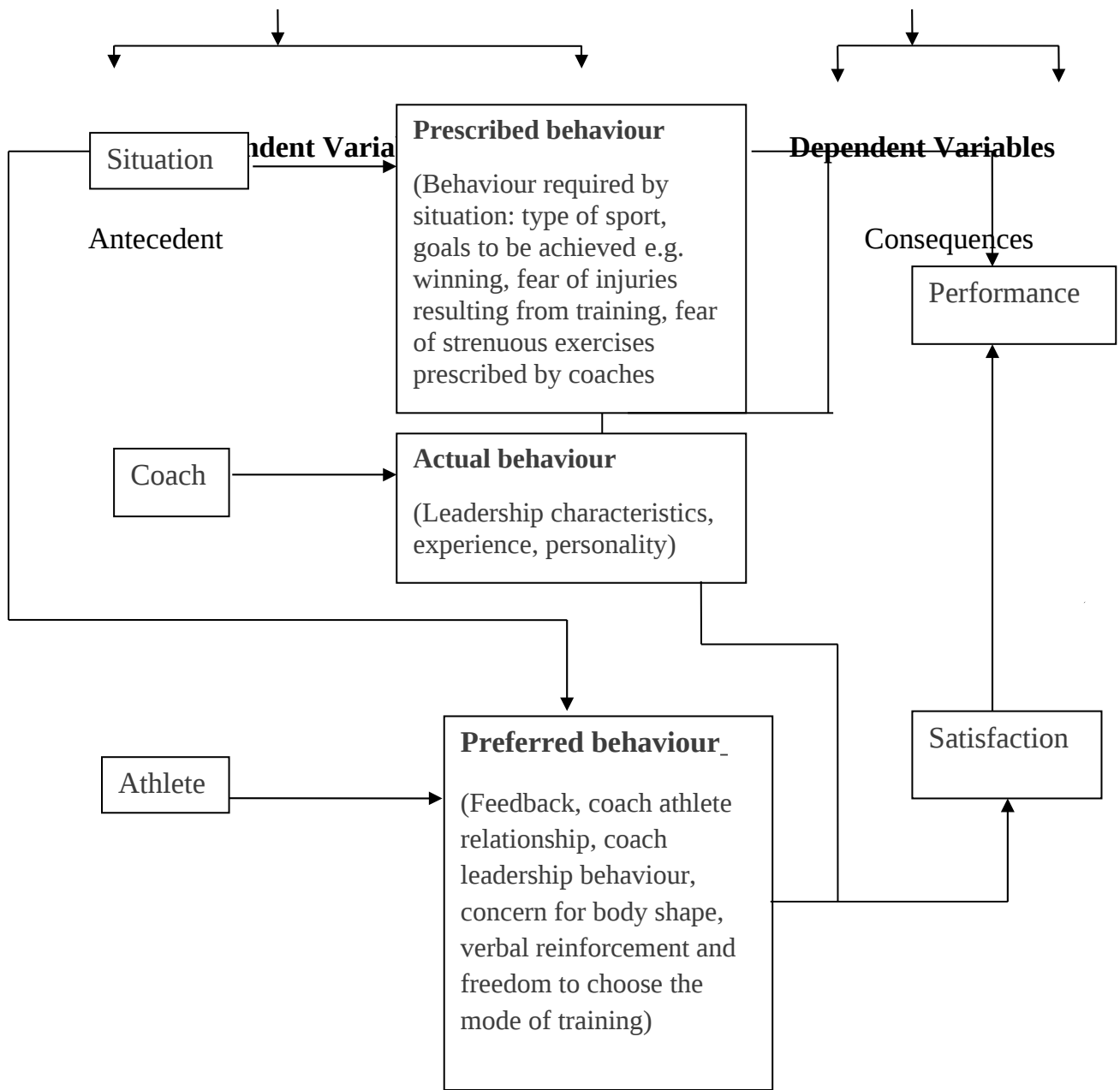


Figure 1: Modified Interactional Model of Coaching (Adapted from Bull, 1991: 112).

1.12 Operational Definition of Terms

Athlete – This refers to female who participate in sports in teacher training colleges in central region of Kenya.

Autocratic Leadership – This refers to leadership style where the coach dictates on what should be done and does not give room for athletes' advice or input.

Body Shape - This refers to attitudinal framework of female athlete about her physical beauty.

Central Region of Kenya-This refers to the region covering Kiambu, Kirinyaga, Murang'a, Nyeri and Nyandarua counties in Kenya.

Coaching – This refers to sports instruction.

Coach -Athlete Relationship-This refers to the kind of relationship which the female athlete would prefer from the coach while being trained. These include personal

relationship with the coach, coach ability to motivate, feedback and encouragement from the coach, coaching experience, preference for male or female coach, preference for coaches as role model, comfort in sharing personal problems to male or female coach, intimidation by the presence of male coaches and preference for youthful or elderly coaches.

Coach Leadership style/ Behaviour-This refers to leadership behaviour portrayed by the coach while training the athletes. These include autocratic, democratic, social support, positive feedback and training and instruction.

Compliment- Appraising an athlete verbally

Democratic Leadership – This refers to a relationship-oriented form of leadership that encourages a coach- athlete interaction and in which the athletes plays a role in decision-making on issues surrounding their training.

Elderly coach – This refers to any person who is 50 years of age and older.

Positive Feedback – This refers to leadership behaviour where the coach reinforces an athlete by recognizing and rewarding good performance.

Psycho-Physical Dimensions-This refers to psychological and physical factors that influence the coaching of female athletes. Physical dimensions include; academic demands, concern for body shape and freedom to choose the mode of training. Psychological dimensions include; coach leadership behaviour, coach athlete relationship, fear of injuries resulting from training, motivation using verbal reinforcement and fear of strenuous exercises prescribed by coaches.

Social Support – This is leadership behaviour used by coaches and is characterized by a concern for the welfare of individual athletes, positive group atmosphere and warm interpersonal relations with them.

Training and Instruction-This refers to coach leadership behaviour aimed at improving the athletes' performance by giving technical instruction on skills, techniques, and strategies by emphasizing and facilitating vigorous training and coordinating the activities of team members.

Verbal Reinforcement-This refers to show of emotions such as yelling, screaming and other emotional displays.

Youthful Coach- This refers to every person between the ages of 15 and 35 years.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the importance of sports in the lives of female athletes, psycho-physical factors influencing female athletes' participation and performance in sports, studies on coaching of female athletes as well as institutional roles of female athletes in teacher training colleges in central region of Kenya.

2.2 Benefits of Participating in Sports

The role that sports can play in the lives of female athletes is significant. Participation in exercise and sport offers female athletes' positive feelings about body image, improved self-esteem, experiences of competency and success and increased self-confidence and well being (Hargreaves, 2001; Collins & Kay, 2007). In addition, there are exercise

benefits for both men and women, but some are unique to women. According to Otis (2000), encouraging female clients to maintain a regular exercise schedule may help prevent medical problems such as osteoporosis (thinning of bones), heart disease, obesity and depression. Otis (2000) further observes that exercise helps women maintain cardiovascular fitness, weight control, muscle strength, bone density, flexibility, coordination, stress management and energy level. The World Health Organization [WHO] (2011) has reported that involvement in regular moderate physical activity can reduce the risk of cardiovascular diseases, diabetes, colon and breast cancer and depression.

2.3 Psycho-Physical Factors Influencing Female Athletes' Participation and Performance in Sports

Female athletes feel conflict about how participation in competitive sport affects their femininity (Weinberg & Gould, 1995). According to Coakley (2009), women quit or avoid sports if their femininity definition conflicts with their athletic roles. Collins and Kay (2003) posit that there is a mismatch between a girls' growing concern with their bodies' appearance, and use of the body as active and functional in sports. Like the work of Collins and Kay, the works of Shaffer and Wittes (2006) conclude that girls may have difficulty reconciling the physical and competitive nature of sports with their emerging feminine self- concept.

Pendleton (2001) postulates that girls are hesitant about participating in sports for fear of becoming too athletic or muscular. Similarly, Otis (2000) argues that women are

concerned that if they exercise, they will develop large, bulky muscles like men. Indeed, it is perhaps for this reason that strength training has been viewed to be too masculine and distressing and not fit for a female athlete (Hofmann, 2007). To many women, lack of muscular features is a sign of attractiveness. As noted by Critcher, Bramham and Tomlison (1995), young women are not involved in physical activity in order to develop strength and fitness but are concerned with enhancing their appearance and making themselves attractive particularly to the opposite sex. These findings also reflect the findings of Diamant (1991) that point out that females are likely to participate in athletic activity as a means of weight control, that is, in-service of appearance.

Female athletes generally seem to value relationships with coaches more than male athletes. According to Weinberg and Gould (1995), female athletes need to establish personal relationships with coaches. In addition, girls respond best to a family-oriented team environment that meets the needs of each individual (Pendleton, 2001). However, there is lack of consensus from the available literature on the kind of the coach-athlete relationship preferred by female athletes. Research has not shown a clear consensus as to whether female athletes prefer a male or a female coach (Frey *et al.*, 2006; Stewart, 2011). Some literature has claimed that female participants tend to favour disclosing feelings to female coaches rather than males and have a strong need for a female coach to relate to (Weinberg & Gould, 1995; Frey *et al.*, 2006). Commenting on this, a female participant in Frey *et al.*, (2006) study, while expressing the feeling of the bond shared with a female coach remarked; “She was a girl and girls can relate to girls. And when they encourage you and you’re friends with them you feel better” (Frey *et al.*, 2006:5). In contrast, in the same study, another female athlete while expressing unwillingness to

disclose feelings to male coaches lamented: “If I had a personal problem with my male coach, I wouldn’t say anything about it” (Frey *et al*, 2006:5). This notion is, however, inconsistent with Suinn’s (1994) assertion that female athletes may be more comfortable with male authority figure. Coakley (2009) on the other hand, argues that female athletes prefer women coaches to be their role models.

According to Hoiness, Weathington and Cotrell (2008), the age difference between the female athlete and the coach is an important determinant of coaching effectiveness. However, literature is not specific on whether female athletes prefer youthful or elderly sports coaches. As noted by Justis (2010), female athletes prefer young coaches since they are athletic, fit and smart. In contrast, according to a study by Suinn (1994), an elderly sport coach was loved by female athletes and was seen as an extended father figure.

Literature is not specific on the kind of leadership behaviour preferred by female athletes. As noted by Woods (2001) and Bull (1991), female athletes prefer a democratic and participatory coaching style that allows them to help make decisions. However, according to Frey *et al.*, (2006), nine out of twelve participants in their study approved authoritarian style of coaching utilized by male coaches as it aided in keeping them focused. Frey *et al.*, (2006) also observe that as with male athletes, female athletes want to be trained hard and challenged. Frey *et al.*, (2006) study findings also indicate that female athletes prefer encouragement and motivation through a greater use of positive feedback. Weinberg and Gould (1995) on the other hand, point out that female athletes’ preference for social support progressively increases through high school and into college. However,

Chellandurai (1993) indicated that athletes seem to be satisfied when coaches emphasize training and instructions as well as positive feedback.

According to Sherman and Hume (2002), girls and women withhold from participating in sports because of fear of injuries. Commenting on this, Janeth Jepkosgei, the Kenyan 800m silver medalist in Berlin while preparing for Daegu Championships in South Korea remarked: "If I remain injury free I have a long way to go. My body is in good shape and I can even run 1:57 at the moment" (Musumba, 2011:71).

Pendleton (2001) postulates that winning for winning's sake is less important for the average female athlete. While winning may be an important element in participating in sports, it is not the only reason why female athletes participate in sports (Weinberg & Gould, 1995, Woods, 2001, Sherman & Hume, 2002). This viewpoint agrees with Stewart and Taylor's (2000) assertion that the primary reason why female athletes involve themselves in sports is not winning as many would suspect, but something as simple as having fun. Stewart and Taylor's (2000) also note that an overemphasis on winning and reduced emphasis on skills acquisition and having fun by coaches affect female athlete's continued involvement in sports. Similarly, Stewart (2011) argues that females seem to value personal improvement over winning more than males and that some female athletes actually can be turned off by coaches who overemphasize winning. However, Stewart argues that, this does not mean that female athletes want to win any less, but may approach competition differently than male athletes.

Women are very sensitive and react strongly to minor and aggressive comments from the coach. According to Weinberg and Gould (1995), female athletes prefer coaches who

communicate openly and respond better to positive verbal feedback rather than criticism. In addition, ambiguous negative criticism is likely to impair their self-perception and are disturbed by negative comments (Pendleton, 2001). Similarly, Woodridge (2001) argues that majority of female athletes are turned off by show of emotions such as yelling, screaming and other emotional displays. According to a study by Sherman and Hume (2002), female athletes describe their least favourite coaches as those who have ever yelled at them. Commenting on this, Weinberg and Gould (1995), in their sampling of female athletes' comments on various aspects of sports and physical activity report the following from one of female respondents: "When I have less self-confidence, the coach's negative comments are difficult to deal with. It is like kicking me when I am down" (Weinberg & Gould, 1995: 590).

2.4 Institutional Roles of Female Athletes

The female athlete combines two roles; that of an athlete and that of a student. She must establish a style that allows her to function comfortably in both roles. As observed by Hoinness *et al.*, (2008), student athletes by definition must deal with the role conflict inherent in acting as both students and athletes. Simiyu (2010) observe that student athletes face challenges of individual nature including their personal involvement in academic- oriented activities, time constraints, class attendance, personal goal setting, physical and emotional fatigue, coach's demands and institutional policies. All these factors may influence the way female athletes need to be coached.

2.5 Related Studies on Coaching of Female Athletes

Klomstem, Marsh and Skaalvick (2005) in their study on adolescent perceptions of masculine and feminine values in sports and physical education, investigated possible gender differences in how 357 secondary students valued the importance of masculine and feminine characteristics within sport and physical education and how their ratings of values were related to their participation in gendered sport. The study results indicated that boys rated appearance, strength, sports competence, endurance strength, and masculinity as significantly more important than did girls. Girls on the other hand rated appearance, good looking face, slender appearance and femininity as significantly more important than did boys. In the study, boys participated in traditionally masculine sports and girls in traditionally feminine sports.

The above study is relevant to the current one, because it points out that female athletes have special concern for body shape while participating in sports. However, the above study fails to specify the extent to which the concern for body shape of female athletes affects their involvement in training activities prescribed by their coaches. Likewise, the target group comprised secondary students whose concern for body shape might differ from that of female athletes in teacher training colleges. As noted by Critcher *et al.*, (1995), young women's concern at adolescent centres around the culture of femininity. However, this might differ from female athletes in teacher training colleges who are past adolescent stage. The study also dwells on comparisons between girls and boys but it is the subjective view of the current researcher that to get an in-depth understanding of unique female athletes body concern needs, the current study should specifically focus on female athletes. In addition, unlike the above study, the current study did not confine itself to gendered sport in order to get a deeper understanding of female athletes' concern

for body shape and how this concern affects their participation in sports. This current study aimed at accomplishing this study gap.

In their study on female athletes experiences and perceptions of male and female coaches, Frey *et al.*, (2006) observe that there are differences on female athletes' preferences for same sex or opposite sex coaches. The study aimed at gaining a comprehensive understanding of female athletes' experiences of being coached by men and women. The study results indicated that female coaches have a greater ability to relate to female athletes since they know what they are going through; different lifecycles and stages of their life. It also established that female coaches have a greater tendency towards being friends with the players and getting to know them more than male coaches. The study results further showed that female athletes do experience a lot of positive feedback and encouragement from the female coaches. On the other hand, the study also revealed that the personal relationships between the female athletes and male coaches are very different from the relationships with female coaches. According to the study, female athletes perceive male coaches as more aggressive and demanding, lack encouragement and positive reinforcement and some athletes are intimidated by their presence. The female athletes feel that they can discuss most anything about the sport, certain plays and tactics with male coaches without discussing with them any personal problems. Interestingly, nine out of twelve participants in the study preferred a male coach citing factors such as greater level of knowledge, knowing what it takes to be successful and having more respect for him.

The above study is of direct importance to the current one in the sense that it gives insights into the extent of female athletes' preference for female or male sports coaches. The study results also highlight the kind of relationship female athletes would prefer from both male and female coaches. However, the study has failed to determine if the coach-athlete relationship of female athletes affects their participation in sports. Additionally, the study has given little attention to the interaction between the coach and the athlete and how that interaction contributes to maximum athlete performance and satisfaction. Thus, it was the subjective opinion of the current study that, in determining the coach athlete relationship, it is necessary to assess not only the perception of athletes towards the coach, but also how that relationship affects their participation in exercises prescribed by their coach. It is in the light of this that the current study aimed at accomplishing this study gap.

In their study on why female athletes quit and implications for coach education, Stewart and Taylor (2000) observe that female athletes quit sports because of variety of reasons. According to the results, 26% of the target population reported that they quit sports because of injury, 18% due to time conflict and 16% because of coaching issues. Other reasons were: ceased being fun (14%), not good enough (9%), and other variables 17% (such as cost, social obligations or pressures, and involvement in other activities such as schoolwork, or responsibilities at home). The study further reported that female athletes described their favourite coaches as those who allow fun, listen to and understand players, knowledgeable of sport and push the team to do its best. The study also noted that least favourite coaches are described by female athletes as rude, yells at players, poor coaching skills, being negative and too strict.

The above study relates to the current study in the sense that it highlights some psychophysical factors influencing coaching of female athletes and how they contribute to female athletes quitting from sport participation. However, the study fails to give an in-depth examination on how some of these factors influence the coaching of female athletes. Additionally, these factors are only mentioned in passing and the study does not show a link between them and how they affect the coaching of female athletes. A study gap thus exists which the current study addressed.

In the examination of whether boys and girls should be coached the same way, Stewart's (2011) study results indicated that there should be differences in the way boys and girls are coached. The purpose of the study was to determine, if, gender differences existed in the former athletes' perception of favourite and least favourite coach characteristics. The study reported that female athletes value communication, coaches who care for them, good role models and positive characteristics of coaches. According to the study, both genders remembered coaching behaviour of coaches who cared for them as a person, cared away from the game, talked to them about school, and asked them about things away from sport. The study results also indicated that winning was less important for the female athletes unlike their male counterparts. The study concluded that coaches should spend more time exploring gender differences and emphasizing working with female athletes.

The above study is relevant to the current study as it indicates that female athletes, unlike their male counterparts have a unique way of responding to coaching behaviours. The study results also indicate that female athletes participate in sports for different reasons as

compared to the male and may respond to coaching techniques differently as well. However, the study fails to give an in-depth examination into how those variables affect female athletes' participation in training activities prescribed by their coaches. It was also not clear from the study whether being remembered as favourite or least favourite coach influenced coaching of both genders or not. The author ironically admitted that being remembered as favourite or least favourite coach was not in itself an absolute measure of coaching effectiveness. Thus, to understand female athletes' unique needs while being trained, a more comprehensive study is an absolute necessity. The current study therefore endeavoured to fill the gap left by the study cited above.

In their study on gender, age, and professional level differences in psychological correlates of fear of injury in Italian gymnasts, Cartoni *et al.*, (2005) observe that female gymnasts tended to be slightly more fearful of physical injury than male gymnasts but this difference did not reach statistical significance. The results of the study showed that gymnasts who were more confident in their abilities experienced less fear of physical injury. The study further noted that very young gymnasts reported greater anxiety and fear of physical injury than adolescent gymnasts, although this age difference seemed to hold especially for those Italian gymnasts who were in early stage of their professional career and typically participated in regional competitions. The study results indicated that fear of physical injury may partially rise in athletes who tend to experience anxiety and who do not have to engage in self-reassuring cognition about their own abilities.

The above study relates to the current study in helping to determine whether female athletes' fear of physical injury influences the way they would want to be coached.

However, the above study failed to show the extent to which fear of physical injury influences female athletes' participation in sports. The authors also confined themselves to gymnastics whose participants might be aware of the physical risks associated with the sport and probably are willing to overcome the risk and therefore results cannot apply to other sports. It is thus, the subjective opinion of the current researcher that a more extensive study covering athletes from other sports is necessary in order to gain a comprehensive insight into whether fear of physical injuries influences the coaching of female athletes. The study also concentrated on gymnasts between the ages of 8-19 years who can easily be influenced by anxiety. To fill this study gap left by the above study, this study did not confine itself to female participants from one particular sport in order to gain a comprehensive understanding of whether fear of physical injury influences coaching of female athletes.

In their study on coaching leadership styles and athlete satisfaction among Malaysian University basketball team, Nazarudin, Fauzee, Jamalis, Geok, and Din (2009) identified the leadership styles of coaches and how those leadership styles contributed to player satisfaction. The objective of the study was to determine leadership styles of coaching preferred by university basketball players, factors of athlete satisfaction in team sport and if there were correlation between leadership styles of coaches and university basketball players' satisfaction. The study comprised 101 basketball players. Respondents were categorized according to the years of study, age, gender, level and years of participation in sports. The results of the study indicated that more athletes preferred training and instruction coaching behaviour, with the highest mean score ($M=3.01$, $SD= .82$), followed by positive feedback coaching behaviour ($M=2.94$, $SD= .85$), social

consideration coaching behaviour (M=2.87, SD= .86), democratic coaching behaviour (M=2.37, SD=.92) and autocratic coaching behaviour (M=2.03, SD=.96).

The above study relates to the current study in the sense that it highlights the various types of leadership styles and how these styles contribute to player satisfaction. The study also shows that athletes prefer some coaching behaviours to others. However, even though respondents in the study were categorized according to gender, the study results on leadership preference were not separated according to gender. Likewise, grouping of male and female athletes together reflected the assumption that the two genders show similar response to the coaching behaviours. Thus, although the study investigated the leadership styles preferred by Malaysian University basketball players, the authors failed to recognize that there might be differences in how both male and female athletes respond to coaching leadership behaviours and this could have influenced their results. Thus, it is the view of the present researcher that to determine the female athletes' most preferred coach- leadership behaviour, a study on female athletes specifically is of essence. This may help in determining the female athletes' most preferred coach- leadership behaviour. A study gap thus exists which the current study addressed.

2.6 Summary of Reviewed Literature

Literature is specific on the benefits of sports participation to female athletes (Hargreaves, 2001; Collins & Kay, 2007; WHO, 2011). However, all the reviewed related studies were foreign, thus a gap exists in establishing whether female athletes in teacher training colleges in Kenya also have unique way of responding to various coaching behaviours. In addition, some of the reviewed studies (Nazarudin *et al.*, 2006;

Stewart, 2011; Klomstem *et al.*, 2005) concentrated on making comparisons between male and females' responses to coaching behaviours and some even made an assumption that the two genders have similar responses and hence these studies failed to recognize that female athletes may have a unique way of responding to coaching behaviours. Likewise, some studies, unlike the current one failed to account for maturity of athletes but instead had young boys and girls, and this could have influenced the results (Stewart, 2011; Klomstem *et al.*, 2005). The aforementioned studies are also imperative to the present study in formulating a model to determine the psycho –physical dimensions of coaching female athletes. Even then, none of the aforementioned studies has explicitly examined the specific psycho- physical factors associated with coaching of female athletes. This study therefore, investigated specific psycho - physical dimensions of coaching female athletes in teacher training colleges in central region of Kenya.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

This study adopted the descriptive survey research design to assess the psycho-physical dimensions of coaching female athletes. It was a suitable research design for this study because it does not attempt to control or manipulate variables but determine current status of phenomena (Kelly, Clark, Brown & Sitzia, 2003), in this case, psycho-physical factors associated with coaching of female athletes.

3.1.1 Variables of the Study

The study dependent variables were; female athletes' performance and satisfaction while being trained. The study independent variables were; fear of injuries resulting from training, concern for body shape, fear of strenuous exercises prescribed by coaches, coach athlete relationship, coach leadership behaviour, academic demands , motivation using verbal reinforcement and freedom to choose the mode of training (exercises). These variables were studied without manipulation or introducing any control group.

3.2 Location of the Study

The location of the study was central region of Kenya. Central region was chosen as the area of study because it has a cross- section of various levels of teacher training colleges. These colleges include both certificate and diploma teacher training colleges.

3.3 Target Population

The population for the study comprised female athletes in public teacher training colleges in central region of Kenya. There are five public teacher training colleges in central region of Kenya. Four are certificate teacher training colleges and one is a diploma teacher training college. The total target population was 2056 female students in the five colleges; 1733 in certificate teachers training colleges and 323 in diploma teacher training college (Provincial Director of Education Central, personal interview, February 17, 2011).

3.4 Sampling Procedures and Sample Size

The sample size for this study was obtained using stratified random sampling procedure. The teacher training colleges were stratified into two strata; certificate teacher training colleges and diploma teacher training college. A proportion of 50% of certificate teacher training colleges was randomly selected using simple random sampling technique. Simple random sampling technique is a sampling procedure which provides equal opportunity of selection for each element in a population (Mugenda & Mugenda, 2003; Kothari, 2009). The four certificate colleges were given numbers which were placed in a container and then two numbers were picked at random. The two colleges corresponding to the numbers were included in the sample. The sample size for certificate teacher training colleges was therefore 2 (50%). Since there was only one diploma teacher training college in central region of Kenya, it was purposively selected. A proportion of 50% of female athletes from each of the colleges comprising 50% of female athletes from each year of study was then selected using simple random sampling. This was consistent with research guidelines on sample size by Mugenda and Mugenda (2003) who postulate that a research should take as big a sample as possible. To ensure every subject had an equal chance of being selected, the researcher picked names at random from the list provided by the deans of curriculum from the respective colleges. The study selected 444 (21.6%) respondents from the two randomly selected certificate teacher colleges and the one diploma training college. According to Hinton (1995), a proportion of 20% sample size is acceptable in surveys. Therefore, the study sample comprised 444 female athletes; 108 from diploma teacher training college and 336 from certificate teacher training colleges in the region.

3.5 Research Instrument

The study used the questionnaire as the main instrument for data collection. A questionnaire is very useful as it eliminates bias since respondents are given the same questions (Burton & Bartlett, 2009). The questionnaire was constructed by the researcher. However, it was validated by the academic staff in the Department of Physical and Health Education and Department of Recreation Management and Exercise Science of Kenyatta University. The questionnaire had four sections; introduction, concern for body shape, coach- athlete relationship, coach leadership behaviour and other psycho- physical factors. Female athletes were asked to indicate the extent to which these psycho- physical factors influences their participation in training activities with responses being very much, lesser extent and not at all.

3.6 Pre-testing of the Study Instrument

Pre-testing of the instrument for data collection was conducted prior to the main study between the months of February and March 2012. Both certificate and diploma teacher training students were represented. The certificate teacher training college used in the pre-test was not included in the actual research. A few athletes in diploma teacher training college were used in the pre-test but were not included in the main study. In diploma teacher training college, a pretest sample of (12, 5%) of the total female athletes population was used while in certificate teacher training college a pretest sample of (12, 3%) was used. Normally, the pretest sample is between 1% and 10% depending on the sample size (Mugenda & Mugenda, 2003). The pre-testing was conducted to help determine the suitability, appropriateness and clarity of the questionnaire items in

addressing the variables under investigation and at the same time determine the reliability of the instruments. The pre-testing of the study instrument was also conducted in order to be able to judge the validity of the instruments.

3.6.1 Validity of the Instrument

To determine the validity, the research instruments were assessed during the pre-testing phase on the relevance of the context used. The researcher's supervisors in the Department of Physical and Health Education provided feedback to the researcher; their input was later incorporated in the final research instrument.

3.6.2 Reliability of Instrument

Mugenda and Mugenda (2003) define reliability as a measure to which a research instrument yields consistent results or data after repeated trials. The pre-testing of instrument was therefore conducted to ensure that it was reliable for collecting data required by the researcher. A total of 24 female athletes took part in pre-testing the instrument. The test-retest technique was used to determine the reliability index of the questionnaire. A time lapse of two weeks was given between the first and second test. This was consistent with research guidelines by Mugenda and Mugenda (2003) who postulates that a researcher should wait one to four weeks before administering the test a second time. The scores from both testing periods were correlated using Pearson product-moment correlation. The calculated reliability index was $r= 0.87$, indicating that the instrument used was reliable enough for the purpose of the study.

3.7 Data Collection Procedures

The researcher sought permission from the principals of the sampled teacher training colleges to use their colleges for data collection. The principals through the office of the dean of curriculum directed the games masters to assist in delivery and collection of questionnaires. Questionnaires were then issued to female athletes and collected upon completion. In diploma teacher training college, all the sampled female athletes were assembled in the entertainment hall and questionnaires were filled as the researcher waited. In one of certificate teacher training colleges, the questionnaires were issued to sampled female athletes in their respective classes and later collected. In the other certificate teacher training college questionnaires were given out during inter-house athletics competition where all sampled female athletes were gathered in the football field and they filled them as the researcher waited.

3.8 Data Analysis and Presentation

The Statistical Package for Social Sciences (SPSS) was used to code and organize the data. The data were summarized into descriptive statistics of frequencies and percentages. Computation of frequencies was used as a statistical method of organizing raw data into meaningful way to ease interpretation. The results were presented in tables. Chi-square (χ^2) was used to test H_{01} . The chi-square is a non-parametric test of significance appropriate when data are in the form of frequency count as it compares proportions actually observed in a study with proportion expected to see if they are significantly different (Hinton, 1995). Wilcoxon signed ranks test was used to test H_{02} and H_{03} . Wilcoxon test is a non-parametric test used to compare two sets of scores that come from the same participant (Kothari, 2009). The acceptance or rejection of hypotheses was set at $P \leq 0.05$.

3.9 Logistical and Ethical Considerations

The researcher secured a research permit from the National Council for Science and Technology (Appendix B). A research authorization was sought from the Ministry of Education through the office of the provincial director of education, Central Province (Appendix D). In addition, a research authorization was also sought from the Office of the President through provincial commissioner, Central Province (Appendix E). The respective principals of the sampled colleges were issued with a letter prior to data collection to seek permission to use their colleges (Appendix F). The researcher before issuing the questionnaires informed the respondents of the importance of the research and the nature of the study. Clarification of various concepts was also done by the researcher prior to filling the questionnaire. The respondents were also assured of confidentiality of the information gathered.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the results of analysis of data, interpretation and discussion of the findings generated from this study. The study focused on psycho-physical dimensions of coaching female athletes in teacher training colleges in Central region of Kenya. The study sought to investigate any association between the female athletes' performance and satisfaction with training in relation to the following psycho-physical factors; concern for

body shape, coach athlete relationship, coach leadership behaviour, fear of injuries, fear of strenuous exercises prescribed by coaches, academic demands, motivation using verbal reinforcement and freedom to choose the mode of training (exercises).

4.2 Respondents' Characteristics

4.2.1 Distribution of Respondents in Relation to their Respective Years of Study

The distribution of the respondents in relation to their respective years of study is shown in Table 4.1.

Table 4.1: Distribution of the Respondents in Relation to their Respective Years of Study

Year of Study	Frequency	Percent
1 st year	168	37.8
2 nd year	236	53.2
3 rd year	40	9.0
Total	444	100

Table 4.1 shows that second year students had the highest number of representation (236, 53.2%) followed by first year students (168, 37.8%), while third year students were the least (40, 9%). This could be explained by the fact that second year students were represented in the two certificate colleges and also in the diploma college, while third year students were only in the one diploma training college.

4.2.2 Distribution of the Respondents according to their Colleges of Affiliation

The distribution of the respondents across their colleges of affiliation is shown in Table 4.2.

Table 4.2: Distribution of the Respondents According to their Colleges of Affiliation

College	Frequency	Percent
Kagumo	108	24.3

Murang'a	172	38.7
Kilimambogo	164	36.9
Total	444	100

Table 4.2 shows that Murang'a Teachers College had the highest number of respondents (172, 38.7%) followed by Kilimambogo Teachers College (164, 36.9%), while Kagumo Diploma Teachers College had the least (108, 24.3%). This could be attributed to the fact that Murang'a College had more female students followed by Kilimambogo, while Kagumo Diploma College had the least.

4.2.3 Distribution of Respondents in Relation to Category of their Colleges

The distribution of the respondents in the respective categories of colleges is shown in Table 4.3.

Table 4.3; Distribution of Respondents in Relation to Category of their Colleges

Category of College	Frequency	Percent
Certificate	336	75.7
Diploma	108	24.3
Total	444	100

Table 4.3 indicates that certificate category had the highest number of respondents (336, 75.7%) while diploma category had the least (108, 24.3%). Table 4.3 also shows that a total of 444 female athletes participated in the study. This could be attributed to the fact

that there were two certificate colleges represented in the study and only one diploma college.

4.2.4 Number of Participants according to their Sports Disciplines

Table 4.4 shows the number of participants per sports disciplines

Table 4.4: Number of Participants per Sports Disciplines

Valid	Sport	Frequency	Percent
	Athletics	107	15.1
	Soccer	85	19.1
	Netball	67	11.3
	Volleyball	50	10.6
	Hockey	47	8.3
	Handball	37	7.4
	Basketball	33	24.1
	Badminton	8	1.8
	Table tennis	2	0.5
	Rugby	1	0.2
	Total	437	98.4
Missing	Not indicated	7	1.6
Total		444	

Table 4.4 shows that the largest proportion of female athletes (107, 24.1%) participated in athletics, followed by 85 (19.1%) soccer, 67 (15.1%) netball, 50 (11.3%) volleyball, 47 (10.6%) hockey, 37 (8.3%) handball, 33 (7.4%) basketball, 8 (1.8%) badminton, 2 (0.5%) table tennis and 1(0.2%) rugby. However, 7 (1.6%) out of the total number of

respondents, did not indicate involvement in any sport. The finding shows that the respondents participate in a variety of sports disciplines. The reason most of the female athletes took part in athletics and the least in rugby could be attributed to the fact that athletics unlike rugby is well developed in teacher training colleges.

4.3 Concern for Body Shape

This section presents findings on the extent to which the concern for body shape of female athletes in both diploma and certificate teacher training colleges affects their involvement in training activities prescribed by their coaches.

4.3.1 Influence of Concern for Body Shape on Training Activities

The female athletes were asked to indicate the extent to which their concern for body shape affects their involvement in training activities prescribed by the coach. The results are summarized in Table 4.5

Table 4.5: Influence of Concern for Body Shape on Training Activities

Variable	Category of college		Options			Total	Chi-square test		
			Not at all	Lesser extent	Very much		Value	df	Sig.
Influence of concern for body shape on training activities	Certificate	F	74	115	147	336	2.474	2	.290
		%	22%	34.2%	43.8%	100%			
	Diploma	F	27	43	38	108			
		%	25%	39.8%	35.2%	100%			
Total	F	101	158	185	444				
	%	22.7%	35.6%	41.7%	100%				

It is evident from Table 4.5 that majority of female athletes 41.7% comprising of 43.8% female athletes from certificate teacher training colleges and 35.2% of female athletes from diploma teacher training college indicated that their concern for body shape very much influences their training. On the other hand, 35.6% comprising of 34.2% female athletes from certificate teacher training colleges and 39.8% of the female athletes from the diploma teacher training college were influenced to a lesser extent, while 22.7% comprising of 22% female athletes from certificate teacher training colleges and 25% of female athletes from diploma teacher training college indicated that it does not affect them at all.

To test the extent to which concern for body shape influences female athletes' participation in sports training activities in diploma and certificate teacher training colleges, the following hypothesis was tested: H_{01} – The extent to which concern for body shape influences female athletes' participation in sports training activities will not differ significantly between athletes in certificate and diploma colleges. Chi-square test of association was computed to test the hypothesis and the results are summarized in Table 4.5. The chi-square analysis of the findings revealed no significant difference ($\chi^2 = 2.474$; $df = 2$; $p = .290$). For example, it is evident from table 4.5 that 22% of female athletes from certificate teacher training colleges are not worried at all with the influence their concern for body shape might have on participation in sports training activities which compares very well with 25% of those in diploma college. Therefore, the null hypothesis that the extent to which concern for body shape influences female athletes' participation in sports training activities will not differ significantly between athletes in certificate and diploma colleges was not rejected. This implies that the concern for body shape

influences female athletes' involvement in training activities regardless of whether they are in diploma or certificate teacher training colleges. This further suggests that games tutors and sports coaches need to create awareness to female athletes about the benefits of engaging in training activities. This will help to change female athletes' perception about the effects of exercises prescribed by coaches on their body shape and instead appreciate that training activities on the contrary helps in maintenance of an individuals' body shape. The current findings regarding the influence of female athletes concern for body shape on training activities agrees with those by Krane, Waldron, Michalenok and Shipley (2001) and Klomstem *et al.*, (2005) who indicated that female athletes have special concern for body shape when participating in sports.

4.3.2 Influence of Fear of Developing Muscular Body Features on Training

The female athletes were asked to indicate the extent to which fear of developing muscular body features affects their involvement in training activities prescribed by the coach. The results are summarized in Table 4.6.

Variable	Category of College	Options					Chi-square test			
			Not at all	Lesser extent	Very much	Total	value	df	Sig.	
Fear of developing muscular body features affect your involvement in training activities prescribed by the coach.		F	100	143	93	336	5.668	2	0.59	
	Certificate	%	29.8	42.6	27.7	100				
		Diploma	F	27	38	43				108
			%	25	35.2	39.8				100
	Total		F	127	181	136				444
			%	28.6	40.8	30.6				100

Table 4.6: Influence of Fear of Developing Muscular Body Features on Training

Table 4.6 reveals that out of the total number of respondents, majority of female athletes 40.8%, 42.6% of them from certificate teacher training colleges and 35.2% from diploma teacher training college indicated that their training to a lesser extent is influenced by fear of developing muscular body features. However, 30.6%, 27.7% of them from certificate teacher training colleges and 39.8% from diploma teacher training college indicated that this influences them very much, while 28.6%, 29.8% of them from certificate training

colleges and 25% from diploma teacher training college indicated the fear of developing muscular body features did not influence them at all.

Chi-square analysis of responses of female athletes in diploma and certificate colleges indicated no significant difference on the extent to which fear of developing muscular body features influences their involvement in training activities ($\chi^2 = 5.668$; $df = 2$; $p = 0.59$). This implies that the fear of developing muscular body features influences female athletes' involvement in training activities irrespective of type or category of college. For example, it is evident from descriptive analysis that majority of female athletes indicated that the fear of developing muscular body features influences their training to a lesser extent. This finding therefore suggests that games tutors and sports coaches should reassure female athletes while training them that involvement in training activities does not contribute to the development of muscular body features. The finding also indicates that games tutors and sports coaches should also create awareness to the female athletes that they do not have the same hormones (androgens) that men have and hence, involvement in training activities prescribed by coaches cannot make them muscular. The creation of this awareness will help to change generalized misconceptions held by female athletes that involvement in training activities will make them develop muscular body features. The current findings of this study are in line with those of Pendleton (2001) who found that girls and women are hesitant about participating in sports for fear of becoming too muscular.

4.4 Coach - Athlete relationship

4.4.1 Preference for Male or Female Coaches

Female athletes were asked to indicate the extent to which they prefer a male or a female coach. The results are summarized in Table 4.7.

Table 4.7: Preference for Male or Female Coaches

Variable	Not at all		Lesser extent		Very much		Not indicated		Test statistics	
	F	%	F	%	F	%	F	%	Z	Sig.
Preference for male coach	41	9.2	83	18.7	319	71.8	1	0.2	-7.753	0.001
Preference for female coach	102	23	189	42.6	153	34.5				

It is depicted from Table 4.7 that majority of female athletes (319, 71.8%) indicated that they prefer a male coach, followed by (83, 18.7%) to a lesser extent and (41, 9.2%) who do not prefer male coach at all.

To further counter-check the responses given by female athletes, they were asked to give their preference for a female coach. The results are summarized in Table 4.7. It is noted that a higher proportion of female athletes (189, 42.6%) indicated they preferred a female coach to a lesser extent, 153 (34.5%) very much and 102 (23%) not at all.

To further test the extent of female athletes' preference for male or female coach, the following hypothesis was tested: H_{02} – There would be no significant difference in

female athletes' preference for female or male sports coaches. A Wilcoxon signed ranks test examined the results of the preference for male or female coach. The results are summarized in Table 4.7. A significant preference of one gender as coaches was found in the results ($Z = -7.753$, $p = 0.001$). This was based on positive ranks. It is evident from the descriptive analysis that a larger proportion of the female athletes (71.8%) indicated preference for male coach than those who favoured female coach (34.5%). Therefore, the null hypothesis that there is no significant difference in female athletes' preference for female or male sports coaches was rejected. This implies that the gender of the coach has a significant influence with regard to coaching of female athletes. The interpretation from this finding is that to ensure effective coaching of female athletes, the teacher training colleges should hire and employ more male coaches than female coaches. The current findings regarding female athletes' preference for a male or female coach are in agreement with those by Frey *et al* (2006) who concluded that female athletes prefer a male coach to a female one, citing such factors as males coach's greater level of knowledge, knowing what it takes to be successful and having more respect for him. Frey *et al* (2006) further argue that since majority of coaches are men, this could help explain the female athletes' preference for male coaches.

4.4.2 Preference for Youthful or Elderly Sport Coaches

Female athletes were asked to indicate the extent of their preference for youthful or elderly coaches. The results are summarized in Table 4.8.

Table 4.8: Preference for Youthful or Elderly Sport Coaches

Variable	Not at all		Lesser extent		Very much		Test statistics	
	F	%	F	%	F	%	Z	Sig
Preference for youthful coach	47	10.6	76	17.1	321	72.3	-9.098	0.000
Preference for elderly coach	141	31.8	179	40.3	124	27.9		

Table 4.8 indicates that most female athletes (321, 72.3%) very much preferred youthful coaches, 76, (17.1%) to a lesser extent and 47, (10.6%) not at all. It is evident from table 4.8 that a larger proportion of female athletes (179, 40.3%) prefer elderly coaches to a lesser extent, 141 (31.8%) not at all and 124 (24.9%) very much.

To test if there was any significant difference in female athletes' extent of preference for youthful or elderly coaches, the following hypothesis was tested: H_{03} – There would be no significant difference in female athletes' preference for youthful or elderly sports coaches in teacher training colleges in central region of Kenya. A Wilcoxon signed ranks test was used to examine the results of the preference for youthful or elderly coaches. The

results are summarized in Table 4.8. A significant preference for one set of age (youthful or elderly) as coaches was found in the results ($Z = -9.098$, $p = 0.000$). This was based on positive ranks. It is evident from the descriptive analysis that the largest proportion of female athletes 321 (72.3%) indicated preference for youthful coaches compared to those who indicated the same view for elderly coaches 124 (27.9%). Therefore, the null hypothesis that there would be no significant difference in female athletes' preference for youthful or elderly sports coaches in teacher training colleges in central region of Kenya was rejected. The finding indicates that the age difference between the female athlete and the coach has a significant influence with regard to coaching of female athletes. This finding therefore suggests that the teacher training colleges should hire and employ more youthful games tutors and sports coaches to coach female athletes. These findings indicating that female athletes prefer youthful coach concur with the works of Justis (2010) who contends that female athletes prefer young coaches since they are athletic, fit and smart.

4.4.3 Preference for a Male or Female Coach as Role Model

Female athletes were asked to indicate the extent to which they prefer male or female coaches to be their role models. The results are summarized in table 4.9.

Table 4.9: Preference for a Male or Female Coach as Role Model.

Variable	Not at all		Lesser Extent		Very Much		Test Statistics	
	F	%	F	%	F	%	Z	Sig
Preference for male coach as role model	71	16	122	27.5	251	56.5	-0.774	0.439
Preference for female coach as role model	76	17.1	138	31.1	230	51.8		

Table 4.9 shows that the largest proportion of female athletes (251, 56.5%) prefer a male coach to be their role model to a large extent, 122 (27.5%) to a lesser extent and 71,(16%) not at all.

To further counter-check the responses given by female athletes, they were asked to indicate the extent to which they prefer a female coach to be their role model. It is evident from Table 4.9 that majority of female athletes (230, 51.8%) indicated they prefer a female coach to be their role model to a large extent, 138 (31.1%) to a lesser extent and 76 (17.1%) not at all. From the results, it is thus clear that majority of female athletes in teacher training colleges in central region of Kenya prefer both male and female coaches

to be their role models. However, it is evident from the descriptive analysis that a larger proportion of female athletes (56.5%) indicated preference for a male coach to be their role model than those who favoured a female one (51.8%).

To test whether there was any significant difference in the extent of female athletes' preference for male or female coach as role model, a Wilcoxon signed ranks test was used to analyse the results. The results are summarized in Table 4.9. No significant difference was found ($Z = -.774$, $p = .439$). This was based on positive ranks. This implies that there is no significant difference in female athletes' preference for male or female coach as role models. For example, from the descriptive analysis, 56.5% indicated preference for male coach to be their role model which compares very well with 51.8% who indicated the same view point for a female one. The results suggests that games tutors and sports coaches of either gender should portray the right mode of training as female athletes' enumerates them as role models. This may be because besides being trained as athletes, they are also training as future games tutors and sports coaches in schools.

4.4.4 Extent of Comfort in Sharing Personal Problems to a Male or Female Coach

Female athletes were asked to indicate the extent to which they were comfortable sharing their personal problems to male or female coaches. The results are summarized in Table 4.10.

Table 4.10: Extent of Comfort in Sharing Personal Problems to a Male or Female Coach

Variable	Not comfortable		Comfortable		Very comfortable		Total		Test statistics	
	F	%	F	%	F	%	F	%	Z	Sig
Comfortable when sharing personal problem to male coach	160	36	133	30	151	34	444	100	-3.970	0.000
Comfortable when sharing personal problem to female coach	103	23.2	100	22.5	241	54.3	444	100		

Table 4.10 shows that a higher number of female athletes (160, 36%) were not comfortable sharing their personal problems with a male coach, 133 (30%) were comfortable and 151 (34%) were very comfortable.

To further counter-check the responses given by female athletes, they were asked to indicate the extent to which they are comfortable sharing their personal problems with a female coach. From Table 4.10, it is noted that most female athletes (241, 54.3%) indicated they were very comfortable sharing their personal problems with a female coach, (103, 23.2%) not comfortable and (100, 22.5%) comfortable.

To test whether there was any significant difference in the extent of female athletes comfort in sharing personal problems with male or female coach, a Wilcoxon signed

ranks test was used to test the results. The results are summarized in Table 4.10. A significant difference was found in the results ($Z = -3.970$, $p = 000$). This was based on negative ranks. This implies that there is a significant difference in female athletes' extent of comfort in sharing personal information to a male or female coach. For example, it is evident from the descriptive analysis that a larger proportion of female athletes (54.3%) indicated that they are more comfortable in sharing their personal problems with a female coach compared to those who indicated the same view of male coach (34%). This finding therefore suggests that while coaching female athletes, there is need to always have a female assistant coach whenever female athletes are being trained by a male coach so that she will be able to handle their personal problems. In addition, the female coach will offer the much needed information with regard to personal problems and issues surrounding the female athletes. The findings further suggests that the teacher training colleges should hire and employ more female sports coaches and tutors so that female athletes can have more coaches whom they can disclose their personal problems to thereby ensuring they enjoy their training programs and sessions. These findings of female athletes comfort in disclosure are in agreement with those of Frey *et al.*, (2006) which also reported that female athletes were more inclined to discuss personal information with a female coach. Frey *et al.*, (2006) study further found that the female athletes can discuss anything about sport, certain plays and tactics with male coaches without discussing with them any personal problem.

4.4.5 Intimidation by Presence of Male Coach

Female athletes were asked to indicate the extent to which they feel intimidated by the presence of a male coach. The results are summarized in Table 4.11.

Table 4.11: Intimidation by Presence of Male Coach

Variable	Not at all		Lesser extent		Very much		Total	
	F	%	F	%	F	%	F	%
Intimidation by presence of male coach	238	53.6	136	30.6	70	15.8	444	100

It is evident from Table 4.11 that majority of female athletes (238, 53.6%) are not at all intimidated by the presence of a male coach, 136 (30.6%) to a lesser extent, while 70 (15.8%) feel very much intimidated. The finding therefore suggests that female athletes are comfortable while being coached by male coaches and are not intimidated by their presence. The current findings are in contrast to those of Frey et al., (2006) who found that many of the female athletes are intimidated by the presence of a male coach.

4.4.6 Other Aspects of Coach-Athlete Relationship

Table 4.12 shows the respondents' views on other aspects of coach-athlete relationship

Table 4.12: Other Aspects of Coach-Athlete Relationship

Variable	Unimportant		Important		Total	
	F	%	F	%	F	%
Extent to which coaching experiences is important to you	32	7.2	412	92.8	444	100
Extent to which personal relationship with the coach is important to you	56	12.6	388	87.4	444	100
Extent to which ability to motivate of the coach is important to you	14	3.2	430	96.8	444	100
Extent to which feedback from the coach is important to you	11	2.5	433	97.5	444	100
Extent to which encouragement of the coach is important to you	14	3.2	430	96.8	444	100

Table 4.12 shows that majority of female athletes (412, 92.8%) indicated that coaching experience is an important aspect of coach-athlete relationship while 32 (7.2%) indicated that it is not important. This finding therefore suggests that to ensure good coach-athlete relationship with female athletes, games tutors and sports coaches should be knowledgeable about the activity they intend to coach female athletes. This finding is in agreement with Frey et al., (2006) results, which found that the female athletes view a good coach as one who is able to perform the skill and have more than adequate knowledge about the sport. The current findings are also in line with those of Stewart and Taylor (2000) who noted that some factors affecting female athletes' performances in sports are the athlete's perception of coaching competence and coaching behaviour.

It is evident from Table 4.12 that majority of female athletes (388, 87.4%) indicated that personal relationship with the coach is an important aspect of coach-athlete relationship while 56 (12.6%) indicated it is not important. This finding of the study suggests that games tutors and sports coaches should understand that female athletes value personal relationship with coaches and thus should create good interpersonal relationship with them. The finding further indicates that while coaching the female athletes, games tutors and sports coaches should also address and relate well with them in a friendly manner. The finding confirms the results of Frey *et al.*, (2006) which found out that female athletes ranked the coach ability to relate well to athletes and understanding athletes' feelings as two of the top three desirable characteristic of a coach.

Table 4.12 shows that majority of female athletes (430, 96.8%) indicated that the ability of the coach to motivate is an important aspect of coach-athlete relationship, while 14 (3.2%) indicated it as being unimportant. This finding indicates that motivation is an important aspect of coach-athlete relationship. The finding therefore suggests that games tutors and sports coaches should motivate female athletes during coaching in order to encourage them to acquire the various sporting skills. This finding also agrees with Pendleton (2001) who postulates that it is important for female athletes to feel comfortable with teammates and coaches who should also motivate them to achieve desired performance.

It is evident from Table 4.12 that the largest proportion of female athletes (433, 97.5%) indicated that feedback from the coach is an important aspect of coach athlete-

relationship, while 11 (2.5%) indicated it as being unimportant. This finding therefore suggests that feedback from the coach is an important aspect of coach-athlete relationship. The finding therefore indicates that those responsible for coaching female athletes should give them feedback regarding their performance. The current finding is in line with the literature of Wooldridge (2001) who argue that it is necessary to provide continuous feedback and encouragement to assist the female athlete in their skill development.

Table 4.12 shows that the largest proportion of female athletes (430, 96.8%) indicated that encouragement of the coach is an important aspect of coach-athlete relationship, while 14 (3.2%) indicated it to be unimportant. This finding therefore suggests that for effective coach-athlete relationship, female athletes need to be encouraged to believe in what they are capable of. The finding further suggests that while coaching, games tutors and sports coaches should provide continuous encouragement to female athletes. A research by Frey *et al.*, (2006) established that many female athletes thrive on self-satisfaction and the belief they are capable of doing certain tasks or drills, and can best achieve this through encouragement from the coach.

4.5 Coach Leadership Behaviour

This section determined the female athletes' most preferred coach-leadership behaviour.

4.5.1 Preference for Various Coach Leadership Behaviour

The female athletes were asked to indicate the extent to which they prefer the following coach leadership behaviours; democratic, autocratic, social support, positive feedback and training and instruction. The results are summarized in Table 4.13.

Table 4.13: Preference for Various Coach Leadership Behaviour

Coach leadership behaviour							Total	
	Not at all		Lesser extent		Very Much		F	%
	F	%	F	%	F	%		
Democratic	5	1.1	68	15.3	371	83.6	444	100.0
Autocratic	335	75.5	85	19.1	24	5.4	444	100.0
Social Support	13	2.9	43	9.7	388	87.4	444	100.0
Positive feedback	6	1.4	19	4.3	419	94.4	444	100.0
Training and instruction	8	1.8	60	13.5	376	84.7	444	100.0

It is evident from Table 4.13 that majority of female athletes (371, 83.6%) prefer democratic coach leadership behaviour, 68 (15.3%) to a lesser extent, while 5 (1.1%) not at all. The largest proportion of female athletes (335, 75.5%) do not at all prefer autocratic coaching leadership behaviour, 85 (19.1%) to a lesser extent, while 24 (5.4%) very much. In addition, most of the female athletes (388, 87.4%) prefer social support coach leadership behaviour, 43 (9.7%) to a lesser extent, while 13 (2.9%) did not prefer it at all. It is also evident from table 4.13 that majority of female athletes (419, 94.4%) prefer positive feedback coach leadership behaviour, 19 (4.3 %) to lesser extent, while 6 (1.4%) not at all. Furthermore, majority of female athletes (376, 84.7%) prefer training and instruction coach leadership behaviour, 60 (13.5 %) to a lesser extent, while 8 (1.8%) did not prefer it at all.

From the descriptive analysis, it is evident that positive feedback coach leadership behaviour has the highest percentage in terms of level of preference (94.4%) and thus is the most preferred by female athletes in teacher training colleges in central region of Kenya. It is also evident from descriptive analysis that the least preferred coach leadership behaviour by female athletes in teacher training colleges in central region of Kenya is autocratic coach leadership behaviour. This finding therefore indicates that female athletes prefer some coaching behaviours to others. Also, since positive feedback had the highest percentage in terms of level of preference, this finding suggests that games tutors and sports coaches in teacher training colleges in central region of Kenya should reinforce their female athletes by recognizing and rewarding good performance. These findings are in contrast with those of Frey *et al.*, (2006) whose majority of participants in their study approved authoritarian style of coaching utilized by male coaches as it aided in keeping them focused. The findings are also in contrast to those of Nazarudin *et al.*, (2009) whose study results indicated that the female athletes' preferred coach leadership behaviour is social support. However, Nazurudin *et al.*, (2009) investigated both male and female athletes' preference for coach leadership behaviour and this could have influenced the results. However, the findings of this study are in agreement with the literature by chellandurai (1993) who indicated that female athletes seem to be satisfied when coaches emphasize training and instruction as well as positive feedback. The results are also in agreement with Cheyne, Fuller and Speed (2000) whose study identified positive feedback as one of coach leadership behaviour preferred by athletes regardless of gender.

4.5.2 Influence of Coach Leadership Behaviour on Training of Female Athletes

The female athletes were asked to indicate the extent to which the coach leadership behaviour affects their involvement in training activities. The results are summarized in Table 4.14.

Table 4.14: Influence of Coach Leadership Behaviour on Training of Female Athletes

Variables		Options			Total
		Not at all	Lesser extent	Very much	
Influence of coach leadership behaviour on training of female athletes	F	37	107	300	444
	% of the total	8.3%	24.1%	67.6	100%

It is evident from Table 4.14 that majority of the female athletes (300, 67.6%) indicated that the coach leadership behaviour influences their involvement in training to a large extent, 107 (24.1%) to a lesser extent and 37 (8.3%) indicated it did not influence them at all. This finding is an indicator that games tutors and sports coaches should be aware that their leadership behaviour affects female athletes' involvement in training. The finding therefore, suggests that coaches should engage in coaching behaviour to which female athletes prefers. These findings are in line with those of Nazurudin *et al.*, (2009), who identified the leadership behaviours of coaches and how those leadership styles contribute to player satisfaction.

4.6 Other Psycho-Physical Factors

Female athletes were asked to indicate the extent to which each of the following has influenced their involvement in training activities with variables being fear of strenuous exercises prescribed by the coach, fear of injuries resulting from training, academic demands, freedom to choose the mode of training and motivation using verbal reinforcement. The results are summarized in Table 4.15.

Table 4.15: Influence of Other Psycho-Physical Factors on Training of Female Athletes

Variable	Not at all		Lesser extent		Very much		Total	
	F	%	F	%	F	%	F	%
Fear of strenuous exercises prescribed by your coaches	86	19.4	229	51.6	129	29.1	444	100
Fear of injuries resulting from training	55	12.4	184	41.4	205	46.2	444	100
Academic demands	88	19.8	189	42.6	167	37.6	444	100
Freedom to choose the mode of training	94	21.2	140	31.5	210	47.3	444	100
Motivation using verbal reinforcement	59	13.3	145	32.7	240	54.1	444	100

Table 4.15 shows that most female athletes (229, 51.6%) are influenced to a lesser extent by fear of strenuous exercises prescribed by coaches, followed by 129 (29.1%) who indicated that they were very much influenced and 86 (19.4%) are not influenced at all. This finding therefore suggests that games tutors and sports coaches should make sure female athletes are comfortable with the exercises they are undertaking during training. The finding further suggests that while training female athletes the exercises should be structured in such a way that they progress from less strenuous to more strenuous.

It is evident from Table 4.15 that majority of female athletes (205, 46.2%) indicated that their involvement in training activities are affected by fear of injuries resulting from

training, 184 (41.4%) to a lesser extent and 55 (12.4%) are not affected at all. This finding indicates that games tutors and sports coaches should be aware that the fear of injuries affects the training of female athletes. The coach must therefore, use various strategies to enhance self- confidence in their abilities as this would reduce the fear of physical injuries. The finding further suggests that female athletes must be reassured that engaging in physical training prescribed by their coaches would not contribute to physical injuries. A research by Cartoni *et al.*, (2004) also concluded that the fear of physical injury affects the coaching of female athletes.

It is clear from Table 4.15 that most female athletes (189, 42.6%) are less influenced by academic demands, followed by 167 (37.6%) who indicated that they were very much influenced and 88 (19.8%) are not influenced at all. This finding therefore suggests that coaches should structure their training programs and sessions such that they do not tamper with the female athletes academic programs. The finding further suggests that games tutors and sports coaches should bear in mind that beside training the female athletes in various sports activities, female athletes also double as students and thus have other academic obligations. The current findings regarding academic demands are in line with those of Simiyu (2010) and Hoinness *et al.*, (2008) who note that student-athletes do face challenges of individual nature including their personal involvement in academic-oriented activities.

Table 4.15 further indicates that a larger proportion of female athletes (210, 47.3%) are more influenced by freedom to choose the mode of training, followed by 140 (31.5%) who indicated that this aspect influence them to a lesser extent and 94 (21.2%) are not

influenced at all. This indicates that female athletes prefer prescribing their own exercises. The finding therefore suggests that those responsible for coaching female athletes should allow them to choose the way they would want to be coached. The finding further suggests that female athletes should be involved in decision-making regarding their training. The current findings are in agreement with the literature by Woods (2001) who argue that female athletes prefer democratic coaching style which includes participation in decision-making.

It is further shown in Table 4.15 that most female athletes (240, 54.1%) are influenced very much by motivation using verbal reinforcement, followed by 145 (32.7%) who indicated lesser extent and 59 (13.3%) who were not influenced at all. This finding therefore suggests that coaches should be aware that their verbal compliment is key to success in coaching female athletes. The finding further suggests that in order to motivate female athletes to be involved in training programs, those responsible for coaching female athletes should provide continuous verbal compliments in training. This piece of finding is in line with the literature by Pendleton (2001) who notes that female athletes need positive feedback as well as praise and encouragement.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions drawn from the findings and recommendations based on the findings.

5.2 Summary of the Study

This study was mainly concerned with investigating the psycho- physical factors that influence the coaching of female athletes. The study was carried out in teacher training colleges in central region of Kenya. The study sample comprised 444 female athletes; 108 from diploma teacher training college and 336 from certificate teacher training colleges in the region. The study used the questionnaire as the main instrument for data collection. The study was guided by the following objectives:

- i. To find out the extent to which the concern for body shape of female athletes in both diploma and certificate teacher training colleges affects their involvement in training activities prescribed by their coaches.
- ii. To determine the female athletes' extent for preference for:
 - a. Male or female coaches.
 - b. Youthful or elderly coaches.
- iii. To determine if the coach –athlete relationship of female athletes' influences their participation in sports in teacher training colleges in central region of Kenya.
- iv. To determine the female athletes' most preferred coach- leadership behaviour.
- v. To find out the extent to which the following factors influence female athletes' participation in sports in teacher training colleges in central region of Kenya.
 - Fear of strenuous exercises prescribed by coaches.
 - Fear of injuries resulting from training.

- Academic demands.
- Motivation using verbal reinforcement
- Freedom to choose the mode of training.

The null hypotheses presented below guided the study:

Ho₁ – The extent to which concern for body shape influences female athletes' participation in sports training activities will not differ significantly between athletes in certificate and diploma colleges.

Ho₂ – There would be no significant difference in female athletes' preference for female or male sports coaches.

Ho₃ – There would be no significant difference in female athletes' preference for youthful or elderly sports coaches in teacher training colleges in central region of Kenya.

The following is a summary of the research findings based on the objectives of the study.

5.2.1 Influence of Concern for Body Shape on Training Activities

The research objective on this area was to find out the extent to which the concern for body shape of female athletes in both diploma and certificate teacher training colleges affects their involvement in training activities prescribed by their coaches. The findings revealed that:

- i. Majority female athletes, (147, 41.7%) indicated that their concern for body shape influences their training to a large extent.
- ii. The study findings revealed that the extent to which concern for body shape influences the female athletes' participation in sports training activities in diploma

teacher training college does not significantly differ from that of female athletes in certificate teacher training colleges. They were in agreement that the concern for their body shapes adversely affected their involvement in training activities.

- iii. Majority of female athletes, (143, 40.8%) indicated that their training to a lesser extent is influenced by the fear of developing muscular body features.
- iv. There is no significant difference on the extent to which fear of developing muscular body features influences female athletes' involvement in training activities. A larger proportion of responses of the female athletes in certificate and diploma colleges indicated that fear of developing muscular body features affected their involvement in training activities only to a lesser extent.

5.2.2 Coach- Athlete Relationship

The research main objective of this area was to determine the extent the coach-athlete relationship of female athletes in teacher training colleges in central region of Kenya influences their participation in training activities prescribed by coach.

5.2.2.1 Female Athletes' Preference for Coaches

The research objective for this area was to determine the female athletes' extent of preference for male or female coaches and also youthful or elderly coaches. Summary of the findings concerning the above revealed that:

- i. There was a significant difference in female athletes' preference for female or male sports coaches. Majority of female athletes (319, 71.8%) indicated preference for male coach than those who favoured female coach (153, 34.5%).

- ii. There was a significant difference in female athletes' preference for youthful or elderly sports coaches. A larger proportion of female athletes (321, 72.3%) indicated preference for youthful coaches compared to those who indicated the same view for elderly coaches (124, 27.9%).
- iii. There was no significant difference in female athletes' extent of preference for male or female coach as role model. The findings revealed that 251 (56.5%) of female athletes indicated preference for male coach to be their role model which compares very well with 230 (51.8%) who indicated the same view point for a female coach.
- iv. There was a significant difference in female athletes' extent of comfort in sharing personal information to a male or female coach. The largest proportion of female athletes (241, 54.3%) indicated that they were more comfortable in sharing their personal problems with a female coach compared to those who indicated the same view of male coach (151, 34%).
- v. Majority of female athletes (238, 53.6%) are not intimidated at all by the presence of a male coach.

5.2.2.2 Other Aspects of Coach-Athlete Relationship

This section presents the other aspects of coach athlete-relationship. Findings concerning the above revealed that:

- i. Majority of the female athletes (412, 92.8%) indicated that coaching experience is an important aspect of coach-athlete relationship.

- ii. Majority of the female athletes (388, 87.4%) in the teacher training colleges in central region of Kenya indicated that personal relationship with the coach is an important aspect of coach-athlete relationship.
- iii. Majority of the female athletes (430, 96.8%) in the teacher training colleges in central region of Kenya regard the ability of the coach to motivate as an important aspect of coach-athlete relationship.
- iv. The largest proportion of the female athletes (433, 97.5%) indicated that feedback from the coach is an important aspect of coach-athlete relationship.
- v. The largest proportion of the female athletes (430, 96.8%) indicated that encouragement from the coach is an important aspect of coach-athlete relationship.

5.2.3 Coach Leadership Behaviour

The research objective for this area was to determine the female athletes' most preferred coach-leadership behaviour. Results of data analysis concerning the above revealed that:

- i. The most preferred coach leadership behaviour by female athletes in the teacher training colleges in central region of Kenya is positive feedback (94.4%), followed by social support (87.4%), training and instruction (84.7%), democratic (83.6%) and autocratic (5.4%).
- ii. Majority of female athletes (300, 67.6%) indicated that the coach leadership behaviour influences their involvement in training to a large extent.

5.2.4 Other Psycho- Physical Factors

The objective pertaining to this area was to finding out the extent to which other psycho-physical factors influence female athletes' participation in sports in teacher training colleges in central region of Kenya. The findings concerning this objective revealed that;

- i. Majority of the female athletes (229, 51.6%) were influenced to a lesser extent by fear of strenuous exercises prescribed by coaches.
- ii. A larger proportion of the female athletes (205, 46.2%) indicated that their involvement in training activities was affected by fear of injuries resulting from training.
- iii. The largest proportion of the female athletes (189, 42.6%) indicated that they were less influenced by academic demands.
- iv. The largest proportion of the female athletes (210, 47.3%) were influenced most by the freedom to choose the mode of training.
- v. Majority of female athletes (240, 54.1%) were influenced by motivation using verbal reinforcement.

5.3 Implications of the Findings

Based on the findings, it is evident that there are psycho-physical dimensions that surround the coaching of female athletes in teacher training colleges in the central region of Kenya. Therefore, it is expected that games tutors and sports coaches should understand and also incorporate the psycho-physical dimensions of coaching female athletes in their training programs.

From the findings, it is also evident that female athletes have physical and psychological needs that have to be understood by coaches. As such, those responsible for coaching

female athletes have a role to ensure they understand their female athletes' physical and psychological needs so that they can address them effectively during training. An understanding of these physical and psychological needs would enable those responsible for coaching the female athletes deal more effectively with athletes whom they understand rather than athletes they assume they understand.

5.4 Conclusions

The following are the conclusions on the psycho-physical factors influencing female athletes' participation and performance in sports. The conclusions are based on the five objectives and findings of the study.

5.4.1 Conclusion on Influence of Concern for Body shape on Training Activities

- i. Female athletes' concern for body shape affects their involvement in training activities.
- ii. The concern for body shape affects female athletes' involvement in training activities regardless of whether they are in diploma or certificate teacher training colleges.
- iii. The fear of developing muscular body features affects to a lesser extent the training of female athletes in teacher training colleges in central region of Kenya.

5.4.2 Conclusion on Coach Athlete Relationship

5.4.2.1 Conclusion on Preference for Male or Female Coaches and Youthful or Elderly Coaches

- i. Female athletes in the teacher training colleges in central region of Kenya prefer male coaches to female ones.
- ii. Female athletes in the teacher training colleges in central region of Kenya prefer youthful coaches to elderly ones.
- iii. Female athletes in the teacher training colleges in central region of Kenya prefer to have both male and female coaches as their role models.
- iv. Female athletes in the teacher training colleges in central region of Kenya are more comfortable sharing their personal problems to female coaches.
- v. Female athletes in the teacher training colleges in central region of Kenya are not at all intimidated by the presence of male coaches.

5.4.2.2 Other Aspects of Coach-Athlete Relationship

- i. Female athletes in the teacher training colleges in central region of Kenya regard coaching experience as an extremely important aspect of coach-athlete relationship.
- ii. Female athletes in the teacher training colleges in central region of Kenya regard personal relationship with the coach as an important aspect of coach-athlete relationship.
- iii. Female athletes in the teacher training colleges in central region of Kenya regard the ability of the coach to motivate as an extremely important aspect of coach-athlete relationship.

- iv. Female athletes in the teacher training colleges in central region of Kenya regard feedback from the coach as an extremely important aspect of coach-athlete relationship.
- v. Female athletes in the teacher training colleges in central region of Kenya regard encouragement from the coach as an extremely important aspect of coach-athlete relationship.

5.4.3 Coach Leadership Behaviour

- i. Positive feedback is the most preferred coach leadership behaviour by female athletes in teacher training colleges in central region of Kenya.
- ii. Female athletes' involvement in training activities is influenced by the type of coach leadership behaviour displayed by the coach.

5.4.4 Other Psycho- Physical Factors

- i. The training of female athletes in the teacher training colleges in central region of Kenya is influenced to a lesser extent by fear of strenuous exercises prescribed by coaches.
- ii. The fear of injuries resulting from training negatively affects training of female athletes in the teacher training colleges in central region of Kenya
- iii. Academic demands do influence to a lesser extent the training of female athletes in the teacher training colleges in central region of Kenya.

- iv. The decision to choose the mode of training influences training of female athletes in the teacher training colleges in central region of Kenya.
- v. Involvement in training activities of female athletes in the teacher training colleges in central region of Kenya is positively influenced by motivation using verbal reinforcement.

5. 5 Recommendations

5.5.1 Recommendations for Practice

In light of study findings, the following recommendations are suggested:

- i. The study revealed that there are psycho-physical factors that influence the coaching of female athletes. Therefore, there is need for coaches to understand the psycho-physical factors influencing female athletes' participation and performance in sports. This could enable them to understand the many factors that influence female athletes' participation in training activities and hence be better equipped to provide them with a satisfying experience that will ensure their long-term participation in training sessions and programmes. The creation of this awareness could be done through the institutions involved in training of coaches and teachers. The institutions involved in in-service training of coaches and teachers should also create awareness on the uniqueness of the female athlete through their training programmes.
- ii. Teachers and coaches in the teacher training institutions should expand awareness and education of the benefits of physical activities to female athletes.

This will help the female athletes avoid misconceptions about the effects of exercises on body shape. This could be done by creating the awareness that training activities on the contrary help in maintenance of individuals' body shape.

- iii. There is need for female athletes to be trained only by coaches who have an understanding of psycho-physical factors affecting coaching of female athletes. The coaches who lack insight on these psycho-physical factors, or who have never been trained on how to handle female athletes before should never be allowed to coach female athletes. This is because they may have little insight into physical and psychological factors that influence the coaching of female athletes thereby denying them the satisfaction that sporting experiences are supposed to offer.
- iv. There is need for management of the teachers training colleges to always have a female assistant coach whenever female athletes are being trained by male coach. This is because according to the study results, female athletes are only comfortable sharing their personal problems to female coaches, a factor that should not be ignored during training for the sake of psychological wellbeing of female athletes. In addition, the female assistant coach, by being a female, will also provide the much needed information in dealing with a female athlete.
- v. There is need of training of teachers/tutors who double as coaches on methodology that equips them with knowledge on the coach- athlete relationship and coach leadership behaviour that is preferred by female athletes.

5.2.2 Recommendations for Policy Formulation

Based on the findings of this study, the following policy recommendations are made: The policy-makers at the Ministry of Education, curriculum developers at Kenya Institute of Education (KIE), the Physical and Health Education Department of Kenyatta University and University of Nairobi, should incorporate the psycho-physical factors that influence coaching of female athletes in the PE curriculum in order to enable the PE teachers /tutors to address or cater for them. In addition they should regularly review their Physical Education curriculum with a view to including the psycho-physical dimensions of coaching female athletes. This will improve the coaching of female athletes since the study findings indeed indicate that there are psycho-physical factors that influence the coaching of female athletes. This will enable coaches and teachers to recognize the unique needs of female athletes while training them. In addition, it will also enable the reviewing of coaching behaviours that traditionally have been regarded as acceptable or permissible to both genders.

5.6 Recommendations for Further Research

The following are suggested as possible areas for further research:

- i. Broader studies need to be conducted to identify other psycho-physical factors which were not addressed in this study influencing female athletes' participation in training activities at other levels of institutions of learning.
- ii. There is also need to replicate the current study on elite female athletes. This could widen the body of knowledge on issues and controversies surrounding the coaching of female athletes.

- iii. A comparative study may be carried out between male and female athletes in order to determine whether male and female athletes should be coached in the same way. This could help to create awareness on whether differences exist, and if they exist, it could help coaches in varying coaching styles to meet the individual needs of the gender being coached.

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APPENDICES

APPENDIX A: QUESTIONNAIRE

Introduction to female athletes

I am a graduate student at Kenyatta University pursuing a Master of Science degree in physical and health education. The purpose of this questionnaire is to attempt to find out, “the psycho- physical dimensions of coaching female athletes in teacher training colleges in central region of Kenya”. All information provided will be used for academic purposes only and it will be treated with outmost confidentiality. Your response to all items will be highly appreciated.

Thank you

Ndambiri, K. Richard

PSYCHO-PHYSICAL DIMENSIONS OF COACHING FEMALE ATHLETES

1. Year of study.....
2. Your college.....
3. Indicate the sport you participate in.....

B: Concern for body shape

Please specify the following by putting a tick or filling in where applicable.

1. Indicate the extent to which the concern for body shape affects your involvement in training activities prescribed by the coach.

Very much Lesser extent Not At All

2. Indicate the extent to which the fear of developing muscular body features affect your involvement in training activities prescribed by the coaches.

Very much Lesser extent Not at all

C. Coach –athlete relationship

3. Indicate the extent to which you prefer the following coaches

a) Male : Very much Lesser extent Not at all

b) Female: Very much Lesser extent Not at all

4. Indicate the extent to which you prefer the following coaches.

Note-Youthful (a coach between the ages of 15 and 35 years).

-Elderly (a coach who is 50 years and older).

a) Youthful: Very much Lesser extent Not at all

b) Elderly: Very much Lesser extent Not at all

5. Indicate the extent to which you prefer the following coaches to be your role model.

a) Male: Very much Lesser extent Not at all

b) Female: Very much Lesser extent Not at all

6. Indicate the extent to which you will be comfortable sharing your personal problems to the following coaches.

a) Male: Very comfortable Comfortable Not comfortable

- b) Female: Very comfortable Comfortable Not comfortable
7. Indicate the extent to which you feel intimidated by the presence of a male coach.
Very much Lesser extent Not at all
8. Indicate the extent to which the following aspects of a coach are important to you
- i. Coaching experience
Unimportant Important
- ii. Personal relationship with the coach
Unimportant Important
- iii. Ability to motivate
unimportant Important
- iv. Feedback from the coach
Unimportant Important
- v. Encouragement
Unimportant Important

D: Coach leadership style/ behaviour

9. Indicate the extent to which you prefer the following coach leadership behaviour/style.
- a) Democratic: (a relationship oriented form of leadership that encourages a coach-athlete interaction and in which the athlete plays a role in decision making on issues surrounding their training)
Very much Lesser extent Not at all
- b) Autocratic: (coach leadership style where the coach dictates on what should be done and does not give room for athlete's advice or input)

Very much Lesser extent Not at all

- c) Social support: (coach leadership style where the coach is concerned with the welfare of individual athletes, positive group atmosphere and warm interpersonal relations with them).

Very much Lesser extent Not at all

- d) Positive feedback: (coach leadership style where the coach reinforces an athlete by recognizing and rewarding good performance).

Very much Lesser extent Not at all

- e) Training and instruction: (coach leadership style aimed at improving the athletes' performance on skills, techniques and strategies by emphasizing and facilitating vigorous training and coordinating the activities of team members)

Very much Lesser extent Not at all

10. Indicate the extent to which the coach leadership behaviour affects your involvement in training activities.

Very much Lesser extent Not at all

E: Other psycho- physical factors

The following questions examine other psycho- physical factors that influence your involvement in training activities prescribed by your coaches.

11. Please indicate the extent to which each of the following has influenced your involvement in training activities prescribed by your coaches.

- i. Fear of strenuous exercises prescribed by your coaches.

Very much Lesser extent Not at all

ii. Fear of injuries resulting from training

Very much Lesser extent Not at all

iii. Academic demands

Very much Lesser extent Not at all

iv. Freedom to choose the mode of training

Very much Lesser extent Not at all

v. Motivation using verbal reinforcement

Very much Lesser extent Not at all

APPENDIX B

Research Authorization from NCST

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
 Telephone: 254-020-241349, 2213102
 254-020-310571, 2213123.
 Fax: 254-020-2213215, 318245, 318249
 When replying please quote

P.O. Box 30623-00100
 NAIROBI-KENYA
 Website: www.ncst.go.ke

Date: **13th February, 2012**

Our Ref: **NCST/RCD/14/012/49/4**

Richard Karani Ndambiri
 Kenyatta University
 P. O. Box 43844 - 00100
 NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Psycho-physical dimensions of coaching female athletes in teacher training colleges in Central region of Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Central Province** for a period ending **31st December 2012**.

You are advised to report to **the Principals of Teacher Training Colleges in Central Province** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf form** of the research report/thesis to our office.



DR. M. K. RUGUTT, PhD, HSC
DEPUTY COUNCIL SECRETARY

Copy to:

The Principals
 Teacher Training Colleges
 Central Province



CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

GPK6055t3mt10/2011



REPUBLIC OF KENYA

RESEARCH CLEARANCE
PERMIT

(CONDITIONS—see back page)

APPENDIX D**Research Authorization Permission from ministry of Education (MoE)****MINISTRY OF EDUCATION**

REPUBLIC OF KENYA

E-Mail –centralpde@gmail.com
Telephone: Nyeri (061) 2030619
When replying please quote

OFFICE OF THE PROVINCIAL
DIRECTOR OF EDUCATION
CENTRAL PROVINCE
P.O. Box 80 - 10100,
NYERI

Ref: CP/GA/29/vol.II/117

15th February, 2012

The Principal

Thogoto Teachers Training College
Kilimambogo Teachers Training College
Murang'a Teachers Training College
Kagumo Teachers Training College
Kamwenja Training College

RE: RESEARCH AUTHORIZATION

Richard Karani of Kenyatta University has been permitted by National Council for Science and Technology to carry out research on "Psycho-Physical dimension of coaching female athletes in Teacher Training Colleges in Central Region of Kenya.

Kindly accord him the necessary assistance.

KABORA I. M
FOR: PROVINCIAL DIRECTOR OF EDUCATION
CENTRAL PROVINCE

C.C.

The Secretary
National Council for Science and Technology
P.O. Box 30623 – 00100
NAIROBI.



OFFICE OF THE PRESIDENT

Telephone: 061 2030619/20
Fax: 061 2032089
E-mail: mkoakati@yahoo.com
When replying please quote

PROVINCIAL COMMISSIONER
CENTRAL PROVINCE
P.O. Box 33-10100
NYERI

Ref. No. ADM 1/57/(200)

15th February 2012

All District Commissioners
CENTRAL PROVINCE

RE: RESEARCH AUTHORIZATION

This is to inform you that Mr. Richard Karani Ndambiri of Kenyatta University, Box 43844-00100 has been authorized to carry out a research on *“Psycho-physical dimensions of coaching female athletes in teacher training colleges in this Province.*

The research period extends up to 31st December 2012.

Any assistance rendered to him is highly appreciated.

A handwritten signature in black ink, appearing to be 'F. M. Sila'.

F. M. SILA
FOR: PROVINCIAL COMMISSIONER
CENTRAL PROVINCE

Provincial Director of Education
CENTRAL PROVINCE

APPENDIX F

Introduction Letter to the Principal

NDAMBIRI K., RICHARD
P O BOX 4-10202
KANGEMA
9/3/2012

THE PRINCIPAL

Dear Sir/Madam,

RE: PERMISSION FOR DATA COLLECTION

I am a graduate student at Kenyatta University pursuing a Master of Science degree in Physical and Health Education. The purpose of the study is to attempt to find out, the psycho-physical dimensions of coaching female athletes.

In view of the aforementioned, I wish to seek permission to use your college to collect data on 19/3/2012.

A permit from National Council for Science and Technology will be produced prior to data collection.

All information provided will be used for academic purposes only and it will be treated with utmost confidentiality.

Your concern will be highly appreciated.

Yours faithfully,

Ndambiri K., Richard